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Information Communication Technology (ICT) Policy of Sri Lanka and its Impacts to Socioeconomic Development: A Review of Sri Lankan Experience

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Abstract: The ICT policy of Sri Lanka has been largely contributed by both local and international institutions with the holistic purpose of enhancing quality of mass and providing sustainable outset for a knowledge society. The methodology followed by the author was secondary data review and the review report discusses the origin of ICT policy and how it integrates with broad set of stakeholders especially with education, government, industry and masses of Sri Lanka. This article provides a review of how successfully Sri Lanka initiates working programmes by the support of institutions accompanied with new policy frameworks. The key insight of this review article educates the importance of strategic implementation of ICT to strengthening country development plans operating as a value adding hub to industries and communities. The contribution of ICT as an enabler to succeed different sectors has been discussed under different segments. Finally, it concludes the way and progress what ICT should have in future to broadening opportunities for third world countries.

Key words: *ICT, E-Sri Lanka, E- Society, Knowledge society, Policies*

1. Introduction to ICT Policy of Sri Lanka

It is obvious that governments all over the world are holistically executing Information and Communication Technologies (ICTs) as a key enabler for accelerating and achieving economic and social development in their country (Aker, 2008). ICT has been a must and an important tool for improving delivery of public services, making government more transparent and accountable, broadening public participation, facilitating the sharing of information and knowledge among the people, and integrating marginalized groups and deprived regions. The constructive looking to regional analysis revels that there have been some notable successes in e-governance in the Asian region, for example in Korea, Malaysia and Singapore, the overall rate of failure of e-government initiatives internationally has been very high as well. The challenge facing many governments today, especially those in developing countries like Sri Lanka, is to avoid the temptation of introducing ICT for ICT's sake. Instead, the focus must firmly be on the human aspect and the needs of the citizens, and then deciding how best, and in what context to apply ICTs to enable effective delivery of those needs.

The Government of Sri Lanka first recognized the need for the development of ICT through the National Computer Policy of 1983 (COMPOL). This first attempt was taken by the Natural Resources, Energy and Science Authority of Sri Lanka (NARESA) on the instructions of President J. R. Jayewardene. A committee appointed by NARESA produced the National Computer Policy Report (COMPOL).The acceptance of the COMPOL report by the Government gave rise to the establishment of CINTEC by Act No. 10 of 1984 as the "Computer and Information Technology Council of Sri Lanka", to function directly under the then President. The Science and Technology Development Act No. 11 of 1994 changed the name to "Council for Information Technology" but retained the acronym CINTEC. Since the first policy initiative, there have many draft ICT policy documents produced, but probably due to the absence of a powerful implementer, these have remained with no noticeable progress in implementation. The "*e*-Sri Lanka" project launched in November 2002 was tasked with the development of an ICT Roadmap for Sri Lanka. The '*E*-Sri Lanka' roadmap resulted in the implementation of the Information and Communication Technology Act, No. 27 of 2003 (ICT Act, 2003) which ensued in the establishment of the Information and Communication Technology Agency of Sri Lanka, (ICTA), repealing the relevant section of the Science and Technology Act which established CINTEC. Thereby, ICTA has been operational since 1st July 2003. The mandate of the *e*-Sri Lanka policy is to build a national information infrastructure, create a framework for the promotion of software and ICT enabled industries, re-engineering government and developing ICT human resources.

Background Primary Government ICT Body to E Sri Lanka: The ICT Agency of Sri Lanka (ICTA) was established as a government owned private company. ICTA is tasked with providing leadership and facilitating implementation of the *E*-Sri Lanka Roadmap. The Vision of the ICTA is to "*take dividends of ICT to every village, to every citizen, to every business and re-engineer the way the Government thinks and works and ultimately shape a technology lead future".* ICTA was created in July 2003 to implement the e-Sri Lanka Roadmap, as a government owned, limited private company reporting to the Minister of Economic Reform, Science and Technology of the Government of Sri Lanka. It was created as an apex body to provide leadership, to energize the process of using ICT for reform and economic growth and to create a more dynamic organization outside the rigidity of the government bureaucracy, more flexible and responsive to such a fast changing technology as ICT.

The concept of E-Sri Lanka had its origins in the private sector, initially among leaders from the local software industry and associations who were working closely with the US Agency for International Development (USAID) on an ICT Cluster Initiative. Inspired by the rapid progress made by its counterparts in neighbouring India, the local software industry envisioned a billion-dollar software industry for Sri Lanka, driven by export-led earnings. Various consultative groups consisting of key stakeholders from the public sector, private sector and from civil society were formed, and they worked on expanding the e-Sri Lanka concept, with input from external organizations including SIDA, USAID and the World Bank, which began to play an increasingly active role. From what was initially an isolated and an ICT sector specific activity, grew an ambitious and integrated nation-wide initiative, with a comprehensive six-program strategy. These six programs were encapsulated and presented in the E-Sri Lanka Roadmap, which was officially launched by the then Prime Minister of Sri Lanka in November 2002. The E-Sri Lanka Roadmap seeks to leverage ICTs towards achieving socio-economic development across multiple sectors of the economy and society. Significantly, the emphasis is not on ICT alone but on using ICT as a development tool to help to improve the lives of citizens, including the rural communities.

2. The ICT Policy of Sri Lanka and its Connection to National Level Outcome

There are currently six core programs being implemented under the supervision and coordination of ICTA, under the e-Sri Lanka program. Each of the programs are sub-divided into a number of strategies or components and then into a number of projects and activities within each component. The key policy components of the e-Sri Lanka program is as follows,

Re-engineering Government: The objective of this component is to use ICT to automate and re-engineer government administration and service delivery mechanisms to the maximum extent possible; to enable implementation of a common infrastructure across government facilitating the merging of functions between agencies to achieve greater efficiency and better delivery of services to citizens; and to outsource automated government services and functions to the private sector.

The Core Strategies of the Re-engineering Government Program are;

- Collaborate with the Administrative Reforms Committee (ARC) and bring about a new governance framework that is enabled by ICT
- Enable implementation of a shared infrastructure across government facilitating the merging of functions between agencies to achieve greater efficiency and better delivery of services to citizens
- Ensure that the stock of ICT equipment required for an efficient and effective E-government program is upgraded
- Outsource automated government services and functions to the private sector which will be used as the engine for re-engineering
- Make public services truly 'citizen centric' by ensuring geographically non-discriminate delivery

The E-government strategy in Sri Lanka is arguably one of the most comprehensive in the South Asian region and possibly among Asian countries as a whole. It is different in that it takes a more holistic approach to development, where e-government is not an end in itself, but instead a piece of an intricate puzzle, which when put together, will aim to significantly impact all sectors of the economy and society and help Sri Lanka

as a nation and its people, to take a major leap forward in economic and development terms. Sri Lanka's e-development strategy, "e-Sri Lanka: an ICT Development Roadmap", elaborated in November 2002, recognized e-government as a critical area and spelt out the need to establish an institutional framework for planning and implementing e-governance. Prior to the development of the e-Sri Lanka Roadmap, the country lacked a coherent national strategy for ICT, though a Ministry for ICT was briefly in existence in the year 2000. Up to this point, e-government activities were sporadic, add-hoc and often restricted to computerization of departments, generally the result of the efforts of a group of individuals with a vision to use ICT to improve the workplace. The introduction of ICT in the Department of Immigration and Emigration is a relatively successful example of this. Given below are some of the e-Government projects in progress (SLICTA, 2007),

DS: in divisional secretarial level this was implemented in 325 divisional secretaries without getting the views of the officers. Currently in initial stage of implementation.

E-Pensions: Pensioners have to come to Colombo to clarify about their payments which is a cumbersome task. Started in mid 2005 this project wants to eradicate this problem. Unfortunately the time allocated to in preparing the BPR was two weeks but took two years to prepare the necessary documentation.

E-ID: started in July 2006 with the main objective of securing the method of registering citizens and issuing ID cards. The one day service which was part of this project was successfully implemented.

E-Passport: from 2003 a fully automated system was implemented (N series) and Colombo and Galle harbours together with the airport are linked with the immigration department.

Building the National Information Infrastructure: The main objective of this component is to provide a modern telecommunications infrastructure throughout Sri Lanka that provides access to all citizens to electronic services irrespective of location, and at charges that are affordable to all sectors of society; to establish a legal infrastructure that is aligned internationally and enables the reengineering of government and e-Commerce to be implemented.

The core strategies of the Information Infrastructure Program are;

- Facilitate the installation of modern information and communication backbones (Regional Telecommunications Networks) to provide competitive and affordable telecommunications services for citizens and appropriate channels for delivery of citizen services, including e-government, e-commerce, e-learning and e-business;
- Establish a network of over 1000 ICT service delivery or Tele-centres (Nanas alas) to empower the population in the rural areas of the country, through affordable access to information and communication technologies;
- Design and implement common standards through guidelines for Technical Architecture, Security and Standards (TASS) for ICT usage across the whole of government and all nationwide activities relating to ICT.

Developing ICT Human Resources: The objective of this component is to develop ICT, ICT enabled industries and general education services at the school and tertiary level, in order to enhance the delivery of general education. This will increase the numbers and quality of higher level ICT professionals and develop a computer literate society in Sri Lanka that can take advantage of the benefits of e-Sri Lanka, reduce poverty and bridge the digital divide.

The cores Strategies of the ICT Human Resources Capacity Building Program are;

- Equip government employees with the appropriate ICT skills and competencies needed to manage and administer e-government services
- Establish a multi-skilled pool of ICT trained professionals, that can facilitate the development of an IT Enabled Services industry in Sri Lanka

- Collaborate with the Ministry of Education to ensure that all schools provide education in basic ICT skills and infuse ICT into teaching and learning of other subjects
- Increase the number of ICT undergraduates for ICT based University courses and provide higher level ICT training to University faculties
- Improve opportunities and incentives for English and ICT literacy, especially in rural areas, in particular through distance and e-learning methods, radio and television based programs

ICT Investment and Private Sector Development: The objective of this component is to achieve major economic and employment growth in Sri Lanka by using ICT to develop the local industry. It also aims to improve Sri Lanka's efficiency, to better compete in the global marketplace and to provide a user friendly business environment, ICT infrastructure and legal environment which promotes growth in the local industry as well as encouraging multinationals to invest in Sri Lanka.

The core strategies for the ICT Investment and Private Sector Development Program are;

- Use re-engineering government as a catalyst for the development of the local ICT sector by enabling the sector to fully participate through outsourcing of services and functions to local companies and use of local products.
- Promote the use of ICT in the non-ICT private sector consequently increasing awareness of its benefits across all levels in the private sector;
- Promote local ICT products and services to the global market;
- Brand Sri Lanka as an attractive destination for global Multi National Corporations to invest and set-up operations (Foreign Direct Investment);
- Create Centres of Excellence (CoE's) for emerging technologies, and increase the opportunities for local entrepreneurs to play a key part in global markets

ICT for Development: To use the emerging ICT infrastructure to make available a range of information sources and services to diverse community groups throughout Sri Lanka, including rural, unemployed, poor; empower them to function more effectively and efficiently and to develop their knowledge, skills and capabilities. Thus it will contribute towards improving their quality of life, increasing their employment potential and leading to increased wealth and a reduction in poverty.

E Society: The e-Society Program will aim to use knowledge and information to move the 'centre of gravity' of power and influence back to the rural masses, while increasing awareness among rural communities on the benefits of ICT.

The core strategies for the e Society program are;

- Raise awareness among rural communities about the uses and benefits of ICT through a strategic and sustained communications campaign
- Establish a grants fund that will adopt a bottom up approach to solicit and develop innovative solutions using ICT to benefit rural poor, women, displaced persons, and those residing in conflict-affected areas
- Enhance the readiness and capacity of communities by developing & delivering appropriate training and capacity building program

3. ICT as an Enabler to Industrial Growth & Good Governance

Business Process Outsourcing (BPO's) as an Instrument of Growth: The first BPO set up in Sri Lanka was an off-shore US operation that was set up as early as 1983. Since then, the BPO's set up in Sri Lanka starting increasing rapidly after 2002, after a change in government policy and it stands at 25 BPO's as at today and 86% of these BPO's have been established under the Board of Investment. These 25 BPO's have a cumulative investment of US $ 13.2 million, and the most popular type of work undertaken in Sri Lanka is accounting services (43% of the BPO's in Sri Lanka), and is followed by call centre services (19% of the BPO's).

A survey carried out by *ICTA* and *LIRNE Asia* in 2006 indicates that low labour costs and operational costs were cited to be the most favourable reasons for locating in Sri Lanka (Wickramasinghe & Kumara ,2009), but the tax incentives offered by the government and the time/distance advantages are also contributory factors, when the destination was selected. The leading consumers of Sri Lankan BPO services are USA, UK and Australia. Nevertheless, it is a significant problem that in 25 years, Sri Lanka has only been able to attract a grand total of 25 BPO's to Sri Lanka.

The Software Development Industry: This is another important method of using ICT to bring about economic development in a nation. The software industry is predominantly export oriented, where clients from all over the world source their software requirements from countries like Sri Lanka, due to the comparatively lower development costs. India is a superpower with regard to this, and has branded them in the international market. The software industry is based on having a pool of software developers who are knowledge workers, and there is a relatively high level of value addition per employee. The value addition in the software industry is significantly higher than most other industries. Another significant benefit of developing this industry is that it has the potential for preventing brain drain. At a time when the intellectuals and the educated handful are leaving the country, the development of the software industry could offer a good reason for IT professionals to stay in Sri Lanka and contribute to the Sri Lankan economy, particularly because the salary scales in the software industry are significantly higher than most other industries. A few Sri Lankan organizations such as Millennium Information Technologies (MIT) and *Virtusa* have taken Sri Lanka to the global arena, and are sufficient proof that Sri Lanka too has got what it takes to be a key player in the global market. However, the contribution made by ICT to Sri Lanka's economy is still very negligible compared with the potential that it offers.

4. ICT's Role in Ensuring Efficiency and Good Governance

The government sector of Sri Lanka has earned itself a reputation for not being one of the most transparent sectors in the country. Sri Lanka stands at number 79 in the Corruption Perception (CP) Index of 2007, out of 179 countries assessed (The Global Information Technology Report, 2007-2008). However, the citizens of this nation go through a number of hardships when interacting with government divisions. The important question to ask is whether ICT has contributed to mitigate these difficulties, especially through the e-government program. The answer would most definitely be yes. For instance, the foreign employment bureau has recently been computerized, making the process of going overseas for employment a lot faster and easier. Similarly, the department of immigration has been computerized, making Sri Lanka one of 5 countries in the world where a passport could be processed in a day. Another project completed very recently (on the 25th of August 2008) is the computerization of the issuing of birth, death and marriage certificates for the residents of Colombo district. This would minimize the time wasted in government departments getting documents issued, and would also be implemented in other districts thereafter. Yet another great initiative is the Government Information Centre (GIC), where anyone who has a query regarding anything related to a government department could call the 1919 hotline and find out what should be done. However, a recent survey (March 2008) conducted by M.G. consultants for ICTA resulted in the following key findings. The general objective of this survey was to ascertain the general level of usage of information and communications technology (ICT) in the government sector. Thereby enabling ICTA to take necessary course of action in re- engineering the government and proceed with the implementation of the e-government solution.

- Only 39% of Government organizations have Chief Innovation Officers (CIO) and of this 29% are males and 10% are females
- Use of standard tools such as word processing, spreadsheets, presentations and databases in day to day work is considerably high
- Electronic mails are not the most popular mode of communication for official purposes among staff members in the Government sector
- Almost half of the organizations maintain their hardware system on a 'stand alone only' basis
- Overall only 8% of the Government sector's permanent staff uses electronic mail for official communication. A staggering 92% DO NOT use e-mails for official communication

- Only 29% of the Government institutions are on the Lanka Government Network (LGN) and 10% use other providers. Of the other providers, Sri Lanka Telecom is the most dominant connectivity provider
- Self study and on the job training are the preferred types of training provided by Government organization for employees handling ICT related work. Training provided towards achieving academic and professional qualifications and trade certifications is a low priority
- Only 7% of Government organizations have a separate budget for ICT related activities. The rest use the organizations' generic allocations for ICT related expenditures

Nevertheless, nearly 60% of the funding received by ICTA is used towards the e-government program, and it could be argued that the results reaped thus far don't necessarily justify the investment. The use of ICT in the government sector was very minimal till some of these initiatives were made, and results cannot be expected overnight, as a change of mindsets have to be made before any other change is carried out. Another important point to note is that unlike investment in the private sector which would result in visible economic growth, investment in e-government does not necessarily translate into economic growth. However, e-government ensures that the foundations are in place for the private sector to build on, as was the case with Singapore.

The Indian case offers considerable food for thought when making this decision. India has always been worse off than Sri Lanka with regard to poverty levels, literacy rates etc. However, the focused development of the ICT industry in India has brought about significant growth to the entire economy, and the benefits of this growth have positively affected the entire nation. This is the reason that India enjoys very high growth rates, and the Indian economy is posing a threat to the traditional super powers of the world. The uniqueness of ICT development is that whilst it bears the potential of being a growth industry by itself, it also has the ability of being an enabler of socio-economic growth in other areas. Thus, unlike other industries, ICT permeates into all other areas, and acts as a catalyst for the development of these industries as well.

5. Conclusion and Recommendations

It is apparent that ICT has the potential of reaping immense benefits. However, the important thing is that it is addressing the national issues that Sri Lanka is facing, and is not just another bandwagon to get on to. ICT has become a fashionable thing to do, but if this is the motivation for developing ICT, the ensuing results will be as short lived as fad itself. It is important that all our policies are focused at addressing our national problems. All our policies should be integrated to solve these issues and evaluated in a broader context.

Having evaluated Sri Lanka's ICT policy, it is apparent that the policy is extremely comprehensive and covers an extremely wide range of areas. However, the prioritization that should be given to each of these areas could be looked into. It is also evident that ICT certainly has the potential of being a growth sector by itself through the development of BPO's as well as the software industry, and drive the economic growth of this nation. It is also an enabler of socio-economic development, impacting a wide range of other areas ranging from education, health and entrepreneurship. These two areas combine together and can jointly contribute towards addressing the issue of poverty in Sri Lanka. With regard to the ethnic conflict, the resolution of the conflict lies in the hearts and minds of people, but ICT could contribute and facilitate the process of healing. Finally, ICT can change the way the government thinks and works. It can bring transparency into the system, and convert it into a dynamic engine that facilitates growth in Sri Lanka.

The Telecommunication Regulatory commission (TRC) of Sri Lanka should sharpen this proper execution of ICT policy since drafting a policy and executing the policy should have a strong integration among people, process and institutions. As an upcoming country in Asia, Sri Lanka can be benefited by ICT in terms of industry development. ICT will pave the ways for new BPO ventures, infrastructure supports and improving human capital. Therefore, it has to amalgamate with ministries, universities, policy makers and foreign missions to enhance the possibilities of getting sustainable results. The lessons learned from Sri Lanka's ICT implementation would be a benchmark to other upcoming countries since ICT has been a must in economic development.

Reference

Aker, J. C. (2008). Does Digital Divide or Provide? The Impact of Cell Phones on Grain Markets in Niger. *BREAD Working Papers (177)*.

Information and Communication Technology Act (No. 27 of 2003): Department of Government Printing of Sri Lanka: 3-5.

Information and Communication Technology Agency (ICTA), Survey on ICT Usage in the Government Sector (2008). MG Consultants Pvt Ltd.

Lirneasia (2006). A baseline sector analysis of the Business Process Outsourcing (BPO) industry of Sri Lanka. 21 August, 2006.

Sri Lanka Information Communication Technology Association (SLICTA). (2007). Rising Demand: The Increasing Demand for IT Workers Spells a Challenging Opportunity for the IT Industry. April: 9-12.

The Global Information Technology Report (2007-2008). Assessing the State of the World's Networked Readiness: Insight from the Networked Readiness Index. *World Economic Forum*: 5-13.

Wickramasinghe, V. & Kumara, S. (2009). Differential Effects of Competency due to BPO and KPO Industry Differences in ITES Sector in Sri Lanka. *Career Development International*, 14(2): 169–185.